



(operant conditioning kiwi) In operant conditioning, stimuli present when a behavior is rewarded or punished come to control the behavior. In contrast, classical conditioning involves involuntary behavior based on the pairing of stimuli with biologically significant events. The study of animal learning in the 20th century was dominated by the analysis of these two sorts of learning, and they are still at the core of behavioral analysis

Classical Conditioning (CC)

1. Rules of CC
 1. Unconditioned Stimulus (US)- naturally biologically potent
 2. Unconditioned Response (UR)- unlearned / naturally present reflex response
 3. Conditioned Stimulus (CS) - A Neutral stimulus paired with Unconditioned Stimulus / naturally biologically potent stimulus
 4. Conditioned Response (CR) - any new response to the previously neutral CS that can be clearly linked to experience with the conditional relationship of CS and US
2. 1927 - **CONDITIONED REFLEXES (KIAA) Pavlov's Dogs**
 1. p408 - The passive defense reflex stands in a definite connection with the hypnotic state. As I suggested previously (p. 312) the old form of hypnosis in animals may be regarded with reason as a reaction of passive self preservation, occurring when the animal meets with some **very powerful or extraordinary external stimulus**, and consisting in a more or less profound immobilization of the animal by means of inhibition.
 2. p410 - I would like to turn briefly to the experiments described at the end of the preceding lecture. If on repeating them in different variations the preliminary results should find full confirmation, these results will throw some light upon one of the darkest points of our subjective self namely, upon the relations between the conscious and the unconscious. The experiments if confirmed will have demonstrated that such an important cortical function as synthesis ("association") may take place even in those cortical areas which are in a state of inhibition on account of the existence at that moment of a predominant focus of strong excitation. Though the actual synthesizing ("associating") activity may not enter our field of consciousness the synthesis ("association") may nevertheless take place, and under favourable conditions it may enter the field of consciousness as a link already formed, seeming to originate spontaneously.
3. "Pavlovian induced priors"

Operant Conditioning (OC)

1. Rules of OC
 1. Positive - add stimulus following behavior
 1. Reward - stimulus is appetitive / desirable
 2. Punishment - stimulus is noxious / undesirable
 2. Negative - remove stimulus following behavior
 1. Reward - stimulus is noxious / undesirable
 2. Punishment - stimulus is appetitive / desirable
2. 1930 - OC Chamber
 1. An operant conditioning chamber (also known as a Skinner Box) is a laboratory apparatus used in the experimental analysis of animal behavior. It was invented by Skinner while he was a graduate student at Harvard University. As used by Skinner, the box had a lever (for rats), or a disk in one wall (for pigeons). A press on this "manipulandum" could deliver food to the animal through an opening in the wall, and responses reinforced in this way increased in frequency. By controlling this reinforcement together with discriminative stimuli such as lights and tones, or punishments such as electric shocks, experimenters have used the operant box to study a wide variety of topics, including schedules of reinforcement, discriminative control, delayed response ("memory"), punishment, and so on
3. 1938 - **REINFORCEMENT THEORY** - Behavior of Organisms
 1. p435 - objection may be leveled against Levin's concepts of **vectors** and **valences** (58). Such a system applies readily to behavior which can be conceived of as orientation or move- ment in a field of force and where the stimulus can be said to generate such a field, d, but it is not an expedient system for handling other kinds of behavior in response to other kinds of stimuli. Field behavior of this sort may also presumably be treated in terms of stimulus and response as here defined, and greater generality may therefore be claimed for the reflex. Another **advantage of the reflex** over the vector or valence is that behavior is defined with a sharper reference to the topography of the organism.

Motivation

1. Rules of Motivation
 1. Extrinsic Motivation - Engaging in Behavior for an External reward
 1. 1943 - Theory of Human Motivation Summary/ Hierarchy of Needs
 1. "There are at least five sets of goals, which we may call basic needs. These are briefly physiological, safety, love, esteem, and self-actualization. In addition, we are motivated by the desire to achieve or maintain the various conditions upon which these basic satisfactions rest and by certain more intellectual desires."
 2. "These basic goals are related to each other, being arranged in a hierarchy of prepotency. This means that the most prepotent goal will monopolize consciousness and will tend of itself to organize the recruitment of the various capacities of the organism. The less prepotent needs are minimized, even forgotten or denied. But when a need is fairly well satisfied, the next prepotent (higher) need emerges, in turn to dominate the conscious life and to serve as the center of organization of behavior, since gratified needs are not active motivators. Thus man is a perpetually wanting animal. Ordinarily the satisfaction of these wants is not altogether mutually exclusive, but only tends to be. The average member of our society is most often partially satisfied and partially unsatisfied in all of his wants. The hierarchy principle is usually empirically observed in terms of increasing percentages of non-satisfaction as we go up the hierarchy. Reversals of the average order of the hierarchy are sometimes observed. Also it has been observed that an individual may permanently lose the higher wants in the hierarchy under special conditions. There are not only ordinarily multiple motivations for usual behavior, but in addition many determinants other than motives."
 3. "Any thwarting or possibility of thwarting of these basic human goals, or danger to the defenses which protect them, or to the conditions upon which they rest, is considered to be a psychological threat. With a few exceptions, all psychopathology may be partially traced to such threats. A basically thwarted man may actually be defined as a 'sick' man, if we wish."
 4. "It is such basic threats which bring about the general emergency reactions"

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cross-cultural examination of

2. Intrinsic - Engaging in Behavior in the absence of an external reward
 1. rats will incur pain, and hungry monkeys will pass up food, to get the opportunity to explore a new area of their enclosure
 1. berynel950 - "Novelty and Curiosity as Determinants of Exploratory Behavior"
 1. Preliminary observations showed that if animals were placed in the maze without prior habituation, they showed considerable anxiety. This was first indicated by great cautiousness of movement and excessive urination and defecation. After they had been in the maze for a period of fearful exploration, during which animals ignored food even though they had not eaten for 24-36 hours. These observations suggest that "curiosity" is perhaps more closely related to anxiety than is ordinarily supposed (@)
 2. harlow950 - Learning and Satiation of Response in Intrinsically motivated complex puzzle performance
 1. (i) Two rhesus monkeys were given 60 two-hour sessions over a twelve-day period for solution of a six-device mechanical puzzle in the absence of externally provided rewards (The monkeys had access at all times through a runway, to a larger outside living cage). Behavior was observed during the first five minutes of each session, and records were made also of manipulations accomplished by the end of each two-hour session. (2) On the thirteenth day, each subject was presented with the puzzle 100 times at six-minute intervals. (3) The ratio of incorrect to correct responses dropped progressively and significantly during the course of the learning period. Number of correct responses and number of correct responses in the first five minutes of the session increased for both subjects. (4) Number of devices manipulated on the satiation day decreased during the course of the day, although number of attacks did not change significantly. (5) A manipulation drive interpretation is offered to account for the finding
 2. deci971 - Effects of externally mediated rewards n intrinsic motivation
 1. "The results indicate that (a) when money was used as an external reward, intrinsic motivation tended to decrease, whereas (b) when verbal reinforcement and positive feedback were used, intrinsic motivation tended to increase."
 2. money may work to "buy off" one's intrinsic motivation for an activity. And this decreased motivation appears (from the results of the field experiment) to be more than just a temporary phenomenon.
 3. Self-determination theory (Deci and Ryan)
 1. 3 essential elements:
 1. Humans are inherently proactive with their potential and mastering their inner forces (such as drives and emotions)
 2. Humans have an inherent tendency toward growth development and integrated functioning
 3. Optimal development and actions are inherent in humans but they don't happen automatically
3. **Addiction**
 1. alexander1981 - **Rat Park** - "Effect of Early and Later Colony Housing on Oral Ingestion of Morphine in Rats"
 1. Male and female rats were reared from weaning either in isolation or in a large colony. At 65 days of age, half the rats in each environment were moved to the other. At 80 days, the animals were given continuous access to water and to a sequence of 7 solutions: 3 sweet or bitter-sweet control solutions and 4 different concentrations of morphine hydrochloride (MHC) in 10% sucrose solution. Rats housed in the colony at the time of testing drank less MHC solution than isolated rats, but no less of the control solutions. Colony-dwelling rats previously housed in isolation tended to drink more MHC solution than those housed in the colony since weaning, but this effect reached statistical significance only at the lowest concentration of MHC. These data were related to the hypothesis that colony rats avoid morphine because it interferes with complex, species-specific behavior.
 2. The caged group continued to partake in the morphine; the rat-park group, even when already addicted, however, did not choose the morphine solution regularly and in fact decreased their morphine use, despite withdrawal
 3. rats have a sweet tooth and are rarely, if ever known to turn down dessert... Because plain morphine is bitter, and rats hate bitterness, the researchers gave both sets of rats morphine-laced water sprinkled with sucrose... They consistently showed preference for the straight H2O and when the two groups were compared, the caged isolated rats drank up to sixteen times more than the park residents... When the researchers added Naloxone... the rat-park rats reversed their aversion to the narcotic water and drank it... this rather stunning finding shows...how rats, when in a "friendly" place, will actually avoid anything, heroin included, that interrupts their normal social behaviors.
 2. 207 - **The Poison That Ruined the Nation**
 1. Theory of Recovery through Retraditionalization and Identity Expansion grounded in data
 1. Retraditionalization as a means to sobriety has been well documented (Arbogast, 1995). Healing initiatives based on aspects of retraditionalization hold the greatest promise (Legna & Novins, 2012; Nebelkopf & Phillips, 2004; Peters et al., 2014). Numerous indigenous and addictions programs have achieved notoriety with this premise (Garrett & Carroll, 2002; McCormick, 2000; Schinke et al., 1988). This study examined the narratives of Native men who have achieved sobriety for their perspectives on how and why connecting with Elders and traditional culture helped them. Consistent with other research (Gordon, 1994; Kinney & Copans, 1999; Thomson, 2000; Thurber & Thomson, 1998), participants reported ineffective and negative experiences with Western treatments and AA because of cultural differences and insensitivity. Many leading researchers and practitioners have recommended that the Native American client's level of acculturation or identification with traditional tribal values be assessed to determine the goodness of fit for Native/and/or syncretic approaches. This small qualitative study suggests something very different in that it was the retraditionalization process itself and exposure to traditional tribal values and healing modalities that were key elements of change. The incorporation of a new aspect of identity as a "traditional" person was key to helping these men achieve sobriety.
 2. Stages of Recovery Through Retraditionalization:
 1. Crisis
 2. Healing
 3. Modeling
 4. Meaning
 5. Social Action
 6. Identity Expansion

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Conformity / De-individualisation / Moral Disengagement / Family Envelope...

1. asch1955 - **Opinions and Social Pressure**
 1. 63.2% of participants responses remained correct
 2. 36.8% of participants conformed to the actors' (incorrect) answer
 3. 5% of participants were always swayed by the crowd
 4. 25% of the participants consistently defied majority opinion
 5. 75% of participants gave at least one incorrect answer out of the 12 critical trials
 6. with no pressure to conform, the error rate on the critical stimuli was less than 1%
2. **Obedience to Authority**
 1. milgram1963 - "Behavioral Study of Obedience"
 1. 65% of experiment participants administered the experiment's final massive 450-volt shock
 2. **Trust (social psychology)**
 1. Another explanation[23] of Milgram's results invokes belief perseverance as the underlying cause. What "people cannot be counted on is to realize that a seemingly benevolent authority is in fact malevolent, even when they are faced with overwhelming evidence which suggests that this authority is indeed malevolent. Hence, the underlying cause for the subjects' striking conduct could well be complacency, and not the alleged capacity of man to abandon his humanity... as he merges his unique personality into larger institutional structures."
 2. Ordinary people, simply doing their jobs, and without any particular hostility on their part, can become agents in a terrible destructive process. Moreover, even when the destructive effects of their work become patently clear, and they are asked to carry out actions incompatible with fundamental standards of morality, relatively few people have the resources needed to resist authority
 3. **Attachment Model**
 1. Harlow's monkeys
 2. Bowlby and the strange protocol
 4. **Dyadic Model Of Trust**
3. **Learned Helplessness**
 1. seligman1972 - Behavioral manifestations.-When an experimentally naive dog receives escape-avoidance training in a shuttle box, the following behavior typically occurs: at the onset of the first painful electric shock, the dog runs frantically about, defecating, urinating, and howling, until it accidentally scrambles over the barrier and so escapes the shock. On the next trial, the dog, running and howling, crosses the barrier more quickly than on the preceding trial. This pattern continues until the dog learns to avoid shock altogether. We have found a striking difference between this pattern of behavior and that exhibited by dogs first given uncontrollable electric shocks in a Pavlovian hammock (1, 2). Such a dog's first reactions to shock in the shuttle box are much the same as those of a naive dog. However, in dramatic contrast to a naive dog, a typical dog which has experienced uncontrollable shocks before avoidance training soon stops running and howling and sits or lies, quietly whining, until shock terminates. The dog does not cross the barrier and escape from shock. Rather, it seems to give up and passively accepts the shock. On succeeding trials, the dog continues to fail to make escape movements and takes as much shock as the experimenter chooses to give.
4. **Bystander Effect**
 1. 1968 -
 1. The bystander effect, or bystander apathy, is a social psychological phenomenon in which individuals are less likely to offer help to a victim when other people are present. The greater the number of bystanders, the less likely it is that any one of them will help. Several factors contribute to the bystander effect, including ambiguity, cohesiveness, and diffusion of responsibility that reinforces mutual denial of a situation's severity
 2. An emergency situation is staged and researchers measure how long it takes the participants to intervene, if they intervene. These experiments have found that the presence of others inhibits helping, often by a large margin. For example, Bibb Latané and Judith Rodin (1969) staged an experiment around a woman in distress. 70 percent of the people alone called out or went to help the woman after they believed she had fallen and was hurt, but when there were other people in the room only 40 percent offered help
 2. Bystander Cognitive Process:
 1. Notice that something is going on - You, the potential helper, must notice an event is occurring
 2. Interpret the situation as being an emergency - You must interpret the event as one in which help is needed
 3. Degree of responsibility felt - You must assume personal responsibility
 4. Form of assistance - You must decide what action to take
 5. Implement the action choice - You must then take action
5. **The Lucifer Effect**
 1. 1971 - Stanford Prison Experiment
 1. internalization and projection, "lucifer effect"
5. **Working Memory**
 1. Working Memory Model (Baddeley's)
 1. Central Executive
 1. Episodic Buffer - Short-term episodic memory
 1. Long-term Episodic memory
 2. Visual-Spatial Sketchpad
 1. Long-term Visual Semantics Memory
 3. Phonological Loop
 1. Long-term Language Memory
 2. 1955 - **Our Capacity for Processing Information**
 1. The number of objects an average human can hold in working memory is 7 ± 2
 2. "You Now Have a Shorter Attention Span Than a Goldfish"
 1. Researchers in Canada surveyed 2,000 participants and studied the brain activity of 112 others while using electroencephalograms (EEGs). Microsoft found that since the year 2000 (or about when the mobile revolution began) the average attention span dropped from 12 seconds to eight seconds.

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2. 77% of people aged 18 to 24 responded "yes" when asked, "When nothing is occupying my attention, the first thing I do is reach for my phone," compared with only 10% of those over the age of 65.
3. **Heuristics**
 1. Heuristics are simple, efficient rules, learned or hard-coded by evolutionary processes, that have been proposed to explain how people make decisions, come to judgments, and solve problems typically when facing complex problems or incomplete information
 2. Where finding an optimal solution is impossible or impractical, heuristic methods can be used to speed up the process of finding a satisfactory solution. Heuristics can be mental shortcuts that ease the cognitive load of making a decision examples that employ heuristics include using a **rule of thumb**, an educated guess, an intuitive judgment, a guesstimate, stereotyping, profiling, or common sense.
 3. tversky1982 - Judgment Under Uncertainty
 1. This article described three heuristics that are employed in making judgments under uncertainty: (i) representativeness, which is usually employed when people are asked to judge the probability that an object or event A belongs to class or process B; (ii) availability of instances or scenarios, which is often employed when people are asked to assess the frequency of a class or the plausibility of a particular development; and (iii) adjustment from an anchor, which is usually employed in numerical prediction when a relevant value is available. These heuristics are highly economical and usually effective, but they lead to systematic and predictable errors.
 4. Stereotypes & Bias,
 1. 1968 - How Discrimination Feels. Jane Elliott Brown Eyes and Blue Eyes - "blue-eyes-brown..."
 1. At first, there was resistance among the students in the minority group to the idea that blue-eyed children were better than brown-eyed children. To counter this, Elliott led the children by stating that melanin was linked to their higher intelligence and learning ability. Shortly thereafter, this initial resistance fell away. Those who were deemed "superior" became arrogant, bossy, and otherwise unpleasant to their "inferior" classmates. Their grades on simple tests were better, and they completed mathematical and reading tasks that had seemed outside their ability before. The "inferior" classmates also transformed - into timid and subservient children who scored more poorly on tests, and even during recess isolated themselves, including those who had previously been dominant in the class. These children's academic performance suffered, even with tasks that had been simple before.
 2. To tie the two lessons together, she used the Sioux prayer "Oh great spirit, keep me from ever judging a man until I have walked in his moccasins"
 3. The outcomes of a 1990 research study by the Utah State University were that virtually all the subjects reported that the experience was meaningful for them. However, the statistical evidence supporting the effectiveness of the activity for prejudice reduction was moderate; and virtually all the participants, as well as the simulation facilitator, reported stress from the simulation.
 4. **Misinformation Effect**
 1. Loftus1973 - Being Sane in Insane Places
 1. It is clear that we cannot distinguish the sane from the insane in psychiatric hospitals. The hospital itself imposes a special environment in which the meanings of behavior can easily be misunderstood. The consequences to patients hospitalized in such an environment the powerlessness, depersonalization, segregation, mortification, and self-blaming seem undoubtedly countertherapeutic.
 2. Confirmation Bias, Self-Fulfilling Prophecy
 3. Stereotype Threat, Golem Effect
 4. **Misinformation Effect**
 1. Loftus1989 - "Misinformation and Memory: The Creation of New Memories"
 1. Misleading information presented after an event can lead people to erroneous reports of that misinformation. Different process histories can be responsible for the same erroneous report in different people. We argue that the relative proportion of times the different process histories are responsible for erroneous reporting will depend on the conditions of acquisition, retention, and retrieval of information. Given the conditions typical of most misinformation experiments, it appears that misinformation acceptance plays a major role, memory impairment plays some role, and pure guessing plays little or no role.
 2. Loftus1997 - "Manufacturing False Memories Using Bits of Reality"
 1. p206 - The false event was constructed from information provided by the relative who gave us details about a plausible shopping trip. The relative was asked to provide the following kinds of information: (a) where the family would have shopped when the subject was about 5 years old; (b) which members of the family usually went along on shopping trips; (c) what kinds of stores might have attracted the subject's interest; (d) verification that the subject had not been lost in a mall around the age of 5.
 2. p206-207 - 25% [of subjects] remembered the [false] event... results show that people can be led to believe that entire events happened to them after explicit suggestions to that effect.
 3. 2018 - Vosoughi2018 and Jassy2018 (lies spread faster) move to misinformation
 5. 1996 - **Information Theory & The User Illusion**
 1. "Information theory - Physiology, britannica"
 1. the human body sends 11 million bits per second to the brain for processing, yet the conscious mind seems to be able to process only 50 bits per second
 2. sensory system / bits per second
 1. eyes / 10,000,000
 2. skin / 1,000,000
 3. ears / 100,000
 4. smell / 100,000
 5. taste / 1,000
 6. **The Neuroscience of Free Will**
 1. 1985
 2. 2008 - The Timing of the Conscious Intention to Move
 1. The researchers hypothesized that, if our conscious intentions are what causes movement genesis (i.e. the start of an

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action), then naturally, our conscious intentions should always occur before any movement has begun. Otherwise, if we ever become aware of a movement only after it has already been started, our awareness could not have been the cause of that particular movement. Simply put, conscious intention must precede action if it is its cause.

2. The researchers found that the time of the conscious intention to move T normally occurred too late to be the cause of movement genesis. See the example of a subject's graph below on the right. Although it is not shown on the graph, the subject's readiness potentials (ERP) tells us that his actions start at -2.8 seconds, and yet this is substantially earlier than his conscious intention to move, time "T" (-1.8 seconds). Matsushashi and Hallett concluded that the feeling of the conscious intention to move does not cause movement genesis; both the feeling of intention and the movement itself are the result of unconscious processing.

6. **Cognitive Dissonance** - the mental discomfort (psychological stress) experienced by a person who simultaneously holds two or more contradictory beliefs, ideas, or values. This discomfort is triggered by a situation in which a belief of a person clashes with new evidence perceived by that person.
 1. 4 Paradigms
 1. Belief Dis-confirmation
 1. 1956 - When Prophecy fails
 2. Induced Compliance
 1. aronson1963"Effect of the Severity of Threat on Devaluation of Forbidden Behavior"
 3. Free Choice
 1. brehn1956 - Post-decision changes in desirability of alternatives
 4. Effort Justification
 1. 1959 - **Cognitive Consequences of Forced Compliance**
 1. aronson1959 - The Effect of Severity of Initiation on Liking for a Group.
 1. College women who volunteered to participate in discussion groups were randomly assigned to one of three experimental conditions: A Severe initiation condition, a Mild initiation condition, and a Control condition. In the Severe condition, subjects were required to read some embarrassing material before joining the group; in the Mild condition the material they read in order to join the group was not very embarrassing; in the Control condition, subjects were not required to read any material before becoming group members. Each subject listened to a recording that appeared to be an ongoing discussion being conducted by the group which she had just joined. Afterwards, subjects filled out a questionnaire evaluating the discussion and the participants. The results clearly verified the hypothesis. Subjects who underwent a severe initiation perceived the group as being significantly more attractive than did those who underwent a mild initiation or no initiation. There was no appreciable difference between ratings by subjects who underwent a Mild initiation and those by subjects who underwent no initiation.
 2. 2010 - The Neural basis of rationalization - "nsq054.pdf"
 1. These findings suggest the characteristic **rationalization processes** that are associated with decision-making may be engaged very **quickly at the moment of the decision, without extended deliberation** and may involve reappraisal-like emotion regulation processes.
 2. "neural activities of rationalization occur in seconds, **without conscious deliberation** on the part of the person; and that the brain engages in emotional responses whilst effecting decisions.[70]" kiwix"(cognitive dissonance)
 3. Conscious deliberation is not about rationalizing, rationing away/compartmentalizing, making excuses to justify the suffering. It is an active approach to ending it through direct response.
 2. **The Myth of Human Nature**
 1. 1987 - "Myth of human nature discourages action for peace"
 1. 40% of the students answered "very much" or "somewhat" to the question "Do you believe that war is intrinsic to human nature?" The proportion was higher in the students from the prestigious liberal arts college (44%), which is the same proportion as was obtained in a pilot study at the same college one year previously (Table V). It is similar to the proportion found by Wahlstrom in her 1984 study in Finland (52%). Similar proportions answered that there is a war instinct (40%) and that wars are inevitable because human beings are naturally aggressive (33%).
 2. Belief, to some extent, appears to affect activity: of the active students 14 of 49 (29%) said that before they began to engage in activity, they had been discouraged by a pessimistic view that humans are intrinsically violent and therefore wars are inevitable. Since this represents the view of active students only, it probably underestimates the effect. In the larger population of students with its high proportion of inactive students, on the other hand, activity may cause a change in belief: this is indicated by the fact that 22 of 48 active students (46%) said that their activity for peace had made them more optimistic about human nature.
 3. *Its importance is underscored by evidence that many young people erroneously believe the myth that war is intrinsic to human nature and that these young people are less likely to take part in action for peace.*
 3. **Terror Management Theory**
 1. 1973/2015 - "The Original Dissonance"
 2. Terror management theory (TMT) is a social psychology theory originally proposed by Jeff Greenberg, Sheldon Solomon, and Tom Pyszczynski. It proposes that **a basic psychological conflict results from having a self-preservation instinct while realizing that death is inevitable** and to some extent unpredictable. This conflict produces terror, and the terror is then managed by embracing cultural values, or symbolic systems that act to provide life with enduring meaning and value

Continue Utilizing "9.10.11 - CC ExpAn,Conc, inc. COMP.docx" to fill in gaps

1350 CC

[immediate conclusion in regards to the robot novels particularly; "robots and empire"]; resolving the idea that "humanity" and what's considered "harm to humanity" is an abstraction, present conditions recognize the basic needs of a majority of humans are not met. This is not an abstraction, this is direct behavioral observation grounded in data. Supposing that we are too inefficiently organized or incapable of remedying the situation is a scape-goat, deficient-image of inferiority



maciejewski2007 - an empirical study of the stage form of grief

deindividuation
individual and the family envelope